

UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS

SECURITIES AND EXCHANGE COMMISSION,)	
)	
)	
Plaintiff,)	
v.)	
)	No. 19-CV-12127-WGY
SHUANG CHEN, et al.,)	
)	
)	
Defendants.)	
)	
WEIGUO GUAN, et al.,)	
)	
)	
Relief Defendants.)	
)	

DECLARATION OF Dr. EUGENE P. CANJELS

Pursuant to 28 U.S.C. § 1746, I submit this Declaration based upon my personal knowledge, information, and belief.

1. I am an Assistant Director in the Division of Economic and Risk Analysis at the United States Securities and Exchange Commission (“SEC” or “Commission”). I currently work in the Office of Litigation Economics and supervise a staff of financial economists. As part of my position, I serve as a point of contact for attorneys throughout the Commission for information on financial and economic aspects of security law investigations.

2. My staff and I perform financial, economic, and statistical analyses to assist the Commission in its investigations and enforcement actions. Before joining the SEC in 2010, I performed similar analyses at Huron Consulting Group and Deloitte FAS. I have over 15 years of experience directing and executing analyses involving securities valuation, securities trading,

portfolio performance, and statistics. I have previously testified on behalf of the Commission in cases involving investment portfolio performance and security trading patterns.

3. I hold a Ph.D. in Economics from Northwestern University, and a Master's degree in Quantitative Economics from Maastricht University in the Netherlands. I have published in peer-reviewed academic journals, and I have taught courses in financial econometrics, microeconomics, time-series analysis, cross-section econometrics, and mathematical methods.

4. With respect to this case, staff of the SEC's Division of Enforcement asked me to review and update the analysis of my former colleague Scott E. Walster. In my work, I was assisted by staff in my office that previously assisted Mr. Walster on this matter. Mr. Walster signed a declaration on October 13, 2019 in which he described the coordinated trading activity of 160 security brokerage accounts; and on December 20, 2019 he signed a declaration that described the coordinated trading activity of 11 additional accounts in the names of Wenwen Du and Honglei Shi. I have added to the analysis one account in the name of Jiafeng Wang. I refer to the 172 accounts as the "Coordinated Accounts." Appendix 1 contains a full list of the Coordinated Accounts.

5. The coordinated trading activity consists of multiple accounts placing orders for the same security on both the buy side and sell side of the market simultaneously at prices that cross (e.g., the sell order price is at the same price or below the buy order price). I define a "Coordinated Event" as orders that cross in one of the following two ways: a.) limit orders with a buy (sell) price that is equal to or higher (lower) than the price of a sell (buy) order coming from

a Coordinated Account; or b.) market orders with a buy (sell) execution price that is equal to or higher (lower) than the price of a sell (buy) order coming from a Coordinated Account.¹

6. Coordinated Events often occurred in cycles. A typical cycle begins with one or more Coordinated Accounts placing orders on lit exchanges² to sell a security at prices that depress the prevailing national best bid (“NBB”) by transacting with outstanding buy orders and/or the national best offer (“NBO”) by placing sell orders above the NBB and below the NBO. After the national best bid and offer (“NBBO”) has been depressed, one or more Coordinated Accounts place orders to buy larger quantities of the security at the depressed prices. The buy orders are placed at prices that cross the prices of one or more of the outstanding sell orders, thereby resulting in Coordinated Events. The buy orders are routed to non-exchange venues (e.g., internalizers, third market makers, and dark pools) to be filled by market participants other than the Coordinated Accounts.³ The Coordinated Accounts then reverse course, influencing the NBBO upward by sending buy orders to lit exchanges. Once the NBBO has been inflated, one or more accounts then send orders to non-exchange venues to sell larger quantities of the security at the inflated prices, thereby completing the cycle.⁴

7. The staff of the SEC’s Division of Enforcement has also asked me to calculate the profits for the Coordinated Accounts obtained through Coordinated Event trading. For each

¹ In Mr. Walster’s first declaration, Coordinated Events were restricted to executions from limit orders routed to non-exchange venues that crossed other limit orders placed on lit exchanges. I have also included executions from market orders routed to non-exchange venues that crossed limit orders placed on lit exchanges in my definition of a Coordinated Event.

² Registered exchanges that provide public information on security order prices.

³ Internalizers are a division of brokerage firms that fill orders through the firm’s own inventory. Third market makers are firms that stand ready to buy or sell a security at publicly quoted prices. See “Investor Publications, Trade Execution,” Securities and Exchange Commission, <https://www.sec.gov/reportspubs/investor-publications/investorpubstradexchtm.html>, accessed September 22, 2021. Dark pools are alternative trading systems that do not publicly disseminate the price information of orders.

⁴ Cycles may also occur in the reverse order, where the NBBO is first inflated by lit orders followed by orders sent to non-exchange venues to sell larger quantities of the security; then the NBBO is influenced downward to buy larger quantities of the security.

Coordinated Account, I analyzed the Coordinated Event profits by calculating realized profits across all the non-exchange venue executions and lit exchange executions. I measured realized profits as the difference between the sale price and purchase price for a security multiplied by the number of shares transacted. I completed the process of matching a Coordinated Account's purchases with its sales in three steps. First, on each day with a Coordinated Event I matched Coordinated Event purchases with Coordinated Event sales that occurred on the same day. If all the Coordinated Event purchases and sales on a day were matched at this point, then no additional matching was done. If any unmatched shares remained, I then matched these remaining Coordinated Event shares with same-day purchases or sales that occurred outside of an Event. Finally, if there were any remaining unmatched Coordinated Event purchases or sales, then I looked to subsequent trading days to match the remaining executions. For the purposes of this analysis, I am reporting Coordinated Event profits on only the short duration positions – those positions that were opened and closed on the same day or closed out on the next trading day. Short duration trades made up 95% of the Coordinated Event executions I analyzed – meaning only 5% of the trades were open for more than one day.

8. Appendix 2 shows the Coordinated Event profits for each of the Defendants and listed Relief Defendants.⁵ The Coordinated Accounts as a collective group produced approximately \$37.4 million in profits from Coordinated Event trading. The profit total is made up of gains from the non-exchange venue executions and losses from Event orders sent to lit exchanges. The Coordinated Accounts generated approximately \$43.4 million in profits on the non-exchange venue side of the Coordinated Events, while the lit exchange orders lost approximately \$6.0 million.

⁵ Based on instruction from the SEC Enforcement staff, I calculated profits for the accounts in the name of Wenwen Du and Honglei Shi from December 23, 2014 through December 3, 2018; and for the remaining accounts I calculated profits from October 15, 2014 through December 3, 2018.

9. I declare under penalty of perjury that the foregoing is true and correct. Executed on October 29, 2021 in Palo Alto, CA.

A handwritten signature in black ink, appearing to read 'Eugene P. Canjels', with a long horizontal flourish extending to the right.

Eugene P. Canjels

APPENDIX 1 – List of Coordinated Accounts

	Name	Data Provider	Account ID
1	Chen, Shuang	Interactive Brokers	XXXX0568
2	Chen, Shuang	SogoTrade	XXXX5253
3	Chen, Shuang	TradeStation	XXXX2450
4	Du, Wenwen	DAS Trader	XXXX6364
5	Du, Wenwen	Interactive Brokers	XXXX6620
6	Du, Wenwen	Pershing	XXXX2821
7	Du, Wenwen	SogoTrade	XXXX6583
8	Du, Wenwen	TradeStation	XXXX3502
9	ForrestHK	DAS Trader	XXXX101
10	ForrestHK	DAS Trader	XXXX102
11	ForrestHK	DAS Trader	XXXX103
12	ForrestHK	DAS Trader	XXXX104
13	ForrestHK	DAS Trader	XXXX105
14	ForrestHK	DAS Trader	XXXX106
15	ForrestHK	DAS Trader	XXXX107
16	ForrestHK	DAS Trader	XXXX108
17	ForrestHK	DAS Trader	XXXX109
18	ForrestHK	DAS Trader	XXXX110
19	ForrestHK	DAS Trader	XXXX111
20	ForrestHK	DAS Trader	XXXX112
21	ForrestHK	DAS Trader	XXXX113
22	ForrestHK	DAS Trader	XXXX114
23	ForrestHK	DAS Trader	XXXX115
24	ForrestHK	DAS Trader	XXXX116
25	ForrestHK	DAS Trader	XXXX117
26	ForrestHK	DAS Trader	XXXX118
27	ForrestHK	DAS Trader	XXXX119
28	ForrestHK	DAS Trader	XXXX120
29	ForrestHK	DAS Trader	XXXX121
30	ForrestHK	DAS Trader	XXXX122
31	ForrestHK	DAS Trader	XXXX123
32	ForrestHK	DAS Trader	XXXX124
33	ForrestHK	DAS Trader	XXXX125
34	ForrestHK	DAS Trader	XXXX126
35	ForrestHK	Interactive Brokers	XXXX7681
36	ForrestHK	Interactive Brokers	XXXX7776
37	ForrestHK	Interactive Brokers	XXXX7778
38	ForrestHK	Interactive Brokers	XXXX7779
39	ForrestHK	Interactive Brokers	XXXX7780

	Name	Data Provider	Account ID
40	ForrestHK	Interactive Brokers	XXXX7782
41	ForrestHK	Interactive Brokers	XXXX7785
42	ForrestHK	Interactive Brokers	XXXX1091
43	ForrestHK	Interactive Brokers	XXXX3251
44	ForrestHK	Interactive Brokers	XXXX3252
45	ForrestHK	Interactive Brokers	XXXX3256
46	ForrestHK	Interactive Brokers	XXXX6173
47	ForrestHK	Interactive Brokers	XXXX6175
48	ForrestHK	Interactive Brokers	XXXX9226
49	ForrestHK	Interactive Brokers	XXXX9227
50	ForrestHK	Interactive Brokers	XXXX9229
51	Gao, Lirong	Charles Schwab	XXXX5400
52	Gao, Lirong	Firstrade	XXXX0653
53	Gao, Lirong	Interactive Brokers	XXXX1003
54	Gao, Lirong	Lightspeed	XXXX0502
55	Gao, Lirong	Pershing	XXXX3464
56	Gao, Lirong	SogoTrade	XXXX8376
57	Guan, Jing	Interactive Brokers	XXXX3189
58	Guan, Jing	TD Ameritrade	XXXX1880
59	Guan, Weiguo	DAS Trader	XXXX1989
60	Guan, Weiguo	Interactive Brokers	XXXX3167
61	Jia, Tonghui	Charles Schwab	XXXX7925
62	Jia, Tonghui	DAS Trader	XXXX5447
63	Jia, Tonghui	Firstrade	XXXX1167
64	Jia, Tonghui	Interactive Brokers	XXXX1818
65	Jia, Tonghui	Lightspeed	XXXX0563
66	Jia, Tonghui	Pershing	XXXX4322
67	Jia, Tonghui	Scottrade	XXXX7878
68	Jia, Tonghui	SogoTrade	XXXX0549
69	Jia, Tonghui	TradeStation	XXXX4678
70	Jia, Xuejie	Scottrade	XXXX3338
71	Jia, Xuejie	SogoTrade	XXXX5458
72	Liu, Jingquan	TD Ameritrade	XXXX2196
73	Liu, Rishan	Interactive Brokers	XXXX0999
74	Liu, Rishan	Lightspeed	XXXX0701
75	Liu, Rishan	SogoTrade	XXXX2928
76	Liu, Rishan	TD Ameritrade	XXXX3092
77	Liu, Vicky	ETrade	XXXX4507
78	Liu, Vicky	TD Ameritrade	XXXX9502
79	Shi, Honglei	Firstrade	XXXX0951
80	Shi, Honglei	Interactive Brokers	XXXX9071

	Name	Data Provider	Account ID
81	Shi, Honglei	Pershing	XXXX4397
82	Shi, Honglei	SogoTrade	XXXX3783
83	Shi, Honglei	TradeStation	XXXX0047
84	Shi, Honglei	ViewTrade	XXXX0160
85	Sui, Shun	Charles Schwab	XXXX1474
86	Sui, Shun	DAS Trader	XXXX9827
87	Sui, Shun	Firstrade	XXXX9297
88	Sui, Shun	Lightspeed	XXXX0615
89	Sui, Shun	Scottrade	XXXX6526
90	Sui, Shun	SogoTrade	XXXX9974
91	Sui, Shun	StockUSA	XXXX9827
92	Sui, Shun	TD Ameritrade	XXXX3078
93	Sui, Shun	TradeStation	XXXX7947
94	Sun, Lujun	Firstrade	XXXX9202
95	Sun, Lujun	Pershing	XXXX4595
96	Sun, Lujun	Scottrade	XXXX0076
97	Sun, Lujun	SogoTrade	XXXX4023
98	Sun, Lujun	StockUSA	XXXX2779
99	Sun, Lujun	TD Ameritrade	XXXX6387
100	Wang, Huailong	DAS Trader	XXXX2756
101	Wang, Huailong	Interactive Brokers	XXXX0639
102	Wang, Huailong	SogoTrade	XXXX7009
103	Wang, Jiadong	Charles Schwab	XXXX1390
104	Wang, Jiadong	Firstrade	XXXX2580
105	Wang, Jiadong	Interactive Brokers	XXXX5023
106	Wang, Jiadong	Lightspeed	XXXX0760
107	Wang, Jiadong	Pershing	XXXX4355
108	Wang, Jiadong	Scottrade	XXXX8636
109	Wang, Jiadong	SogoTrade	XXXX3797
110	Wang, Jiadong	TD Ameritrade	XXXX1379
111	Wang, Jiafeng	DAS Trader	XXXX4054
112	Wang, Jiafeng	DAS Trader	XXXX2112
113	Wang, Jiafeng	DAS Trader	XXXX2130
114	Wang, Jiafeng	Interactive Brokers	XXXX3018
115	Wang, Jiafeng	Scottrade	XXXX1448
116	Wang, Jiafeng	SogoTrade	XXXX2596
117	Wang, Jiafeng	TradeStation	XXXX0034
118	Wang, Jiali	Interactive Brokers	XXXX6224
119	Wang, Jiali	Scottrade	XXXX1486
120	Wang, Luping	Firstrade	XXXX9288
121	Wang, Luping	Interactive Brokers	XXXX5678

	Name	Data Provider	Account ID
122	Wang, Luping	SogoTrade	XXXX2799
123	Wang, Xiaosong	Charles Schwab	XXXX2027
124	Wang, Xiaosong	DAS Trader	XXXX3479
125	Wang, Xiaosong	DAS Trader	XXXX9122
126	Wang, Xiaosong	Just2Trade	XXXX4032
127	Wang, Xiaosong	KingTrade	XXXX2035
128	Wang, Xiaosong	Lightspeed	XXXX0051
129	Wang, Xiaosong	Scottrade	XXXX3298
130	Wang, Xiaosong	SogoTrade	XXXX3717
131	Wang, Xiaosong	TD Ameritrade	XXXX7832
132	Wang, Xiaosong	TradeStation	XXXX1783
133	Wu, Linlin	Charles Schwab	XXXX7173
134	Wu, Linlin	Firstrade	XXXX5379
135	Wu, Linlin	Interactive Brokers	XXXX7167
136	Wu, Linlin	Lightspeed	XXXX0611
137	Wu, Linlin	Pershing	XXXX4405
138	Wu, Linlin	Scottrade	XXXX7216
139	Wu, Linlin	SogoTrade	XXXX0556
140	Wu, Linlin	StockUSA	XXXX0165
141	Wu, Linlin	TD Ameritrade	XXXX1215
142	Xing, Lin	Charles Schwab	XXXX2919
143	Xing, Lin	DAS Trader	XXXX9155
144	Xing, Lin	DAS Trader	XXXX2170
145	Xing, Lin	ETrade	XXXX0050
146	Xing, Lin	Firstrade	XXXX2793
147	Xing, Lin	Scottrade	XXXX2448
148	Xing, Lin	SogoTrade	XXXX4414
149	Xing, Lin	TradeStation	XXXX1953
150	Xu, Diansong	Interactive Brokers	XXXX3361
151	Yang, Weigang	Firstrade	XXXX5721
152	Yang, Weigang	Interactive Brokers	XXXX9259
153	Yang, Weigang	Lightspeed	XXXX0671
154	Yang, Weigang	SogoTrade	XXXX2092
155	Yang, Weigang	TD Ameritrade	XXXX9614
156	Yang, Yong	Charles Schwab	XXXX4214
157	Yang, Yong	DAS Trader	XXXX1282
158	Yang, Yong	Firstrade	XXXX6505
159	Yang, Yong	Interactive Brokers	XXXX9311
160	Yang, Yong	Lightspeed	XXXX0579
161	Yang, Yong	Pershing	XXXX4389
162	Yang, Yong	SogoTrade	XXXX8245

	Name	Data Provider	Account ID
163	Yang, Yong	TradeStation	XXXX6465
164	Zhai, Jingru	Firstrade	XXXX0060
165	Zhai, Jingru	Interactive Brokers	XXXX2973
166	Zhai, Jingru	SogoTrade	XXXX3007
167	Zhao, Jiancheng	Charles Schwab	XXXX9327
168	Zhao, Jiancheng	DAS Trader	XXXX1302
169	Zhao, Jiancheng	Firstrade	XXXX3527
170	Zhao, Jiancheng	Interactive Brokers	XXXX9381
171	Zhao, Jiancheng	Lightspeed	XXXX0660
172	Zhao, Jiancheng	SogoTrade	XXXX9049

APPENDIX 2

Coordinated Event Profits

October 15, 2014 - December 3, 2018

		Coordinated			Total	Profits before	Profits
Name		Events	First Event	Last Event	Profits	June 15, 2017	on or after June 15, 2017
1	Wu, Linlin	10,185	4/24/17	10/15/18	\$6,116,493	\$7,668	\$6,108,825
2	Wang, Jiadong	4,018	2/26/18	12/3/18	\$5,648,632	\$0	\$5,648,632
3	Sun, Lujun	3,749	2/26/18	12/3/18	\$4,116,966	\$0	\$4,116,966
4	Xing, Lin	26,392	1/9/15	10/16/18	\$3,820,667	\$3,937,187	(\$116,521)
5	Jia, Tonghui	23,532	6/3/16	11/30/18	\$3,164,492	\$2,869,365	\$295,126
6	Gao, Lirong	18,636	10/25/16	10/10/18	\$2,507,455	\$2,366,615	\$140,841
7	Yang, Yong	9,499	10/11/16	10/15/18	\$2,500,309	\$1,208,343	\$1,291,966
8	Du, Wenwen	19,497	10/26/15	10/10/18	\$2,466,894	\$1,782,530	\$684,363
9	Liu, Vicky	5,246	11/3/16	11/30/18	\$1,351,456	\$153,552	\$1,197,903
10	Wang, Xiaosong	15,836	10/15/14	8/20/18	\$1,235,056	\$1,152,412	\$82,645
11	Zhao, Jiancheng	17,384	10/10/16	10/17/18	\$1,215,892	\$700,501	\$515,391
12	Sui, Shun	17,672	6/15/17	11/29/18	\$1,023,354	\$0	\$1,023,354
13	Chen, Shuang	15,760	3/23/15	8/31/18	\$929,139	\$928,586	\$553
14	Wang, Jiafeng	21,875	10/15/14	10/16/18	\$905,441	\$933,526	(\$28,084)
15	Jia, Xuejie	3,628	5/6/15	8/30/18	\$851,596	\$853,493	(\$1,897)
16	Wang, Huailong	15,097	1/13/16	10/15/18	\$674,845	\$1,084,072	(\$409,227)
17	Yang, Weigang	9,825	11/2/17	9/26/18	\$308,207	\$0	\$308,207
18	Liu, Rishan	12,576	2/27/18	11/29/18	\$236,827	\$0	\$236,827
19	Guan, Jing	212	1/7/16	2/19/16	\$183,515	\$183,515	\$0
20	Shi, Honglei	3,036	12/31/14	10/16/18	\$141,134	\$42,689	\$98,445
21	Liu, Jingquan	482	7/30/18	8/23/18	\$88,101	\$0	\$88,101
22	Wang, Jiali	297	11/7/14	11/1/16	\$81,870	\$81,870	\$0
23	Wang, Luping	1,556	7/25/17	5/30/18	\$47,975	\$0	\$47,975
24	Zhai, Jingru	81	5/9/18	10/5/18	\$23,304	\$0	\$23,304
25	Guan, Weiguo	98	10/15/14	12/15/14	\$5,362	\$5,362	\$0
26	ForrestHK	114,975	10/15/14	9/8/17	(\$2,225,761)	(\$2,135,231)	(\$90,529)
		187,551	10/15/14	12/3/18	\$37,419,222	\$16,156,055	\$21,263,167

Sources: Order and Execution Blotters

Notes: Event profits generated by Honglei Shi and Wenwen Du prior to December 23, 2014 are excluded.